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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,482	09/24/2001	Brian M. Foley	033337/0103	5798
22428	7590	07/01/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			LAVARIAS, ARNEL C	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/960,482

Applicant(s)

FOLEY, BRIAN M.

Examiner

Arnel C. Lavarias

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AK

-- Th MAILING DATE of this communication appears on th cover sheet with th correspondenc address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-16, 18-26 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) 22-26 and 28-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-16, 18-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendments to Claims 1, 12, and 22 in the submission dated 4/12/04 are acknowledged and accepted.
2. The cancellation of Claims 6, 17, and 27 in the submission dated 4/12/04 is acknowledged and accepted.

### ***Response to Arguments***

3. The Applicant argues that, with respect to newly amended Claims 1 and 12, the combined teachings of McGrath et al., Kobayashi et al., and Vidacovich et al. fail to teach or reasonably suggest an equipment rack and fiber handling track, both including a plurality of radius control tabs, the radius control tabs further restricting the bending of the optical fibers diverted by the radius control bosses. The Examiner respectfully disagrees. Turning to the Vidacovich et al. reference, the Examiner directs the Applicant to Figure 7, which shows the plurality of radius control tabs (See 104 of Figure 1 for reference) in use. Multiple instances in Figure 7 show the radius control tabs further restricting the bending of the optical fiber.
4. Claims 1-5, 7-16, 18-21 are rejected as follows.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 4, 7-13, 15, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrath et al. (U.S. Patent Application Publication US2001/0031124 A1), of record, in view of Kobayashi et al. (JP 61-223809), of record, and Vidacovich et al. (U.S. Patent No. 5402515), of record.

McGrath et al. discloses an equipment rack and fiber handling track (See for example Figures 1-5, 7), the equipment rack comprising one or more subracks (See 60, 64 in Figure 7) mounted in a first direction in the equipment rack, and one or more patch panels (See 64 in Figure 7) mounted in the subrack and having one or more ports coupled to a respective optical fiber (See 70 in Figure 7); the fiber handling track comprising one or more radius control bosses (See for example upper fingers 30 in Figure 4 on which cover 52 is resting on) located along a first side of the fiber handling track, each of the radius control bosses adapted to receive in a first direction an optical fiber coupled to at least one of one or more circuit cards and divert the received optical fiber from the first direction to a second direction substantially perpendicular to the first direction (See Figure 7). It is noted that the curvature of the radius control bosses limits the curvature of the fiber to a minimum bend radius. Although McGrath et al. does not specifically disclose one or more circuit cards to which the optical fibers are coupled to (For example

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in Figure 7, the optical fibers are coupled via connectors to a patch panel 64), it is well known in the art to have the patch panel 64 include circuit card or be replaced by circuit cards. McGrath et al. further discloses fiber retention tabs located along a second side of the fiber handling track opposite the first side, the fiber retention tabs retaining the optical fibers diverted by the radius control bosses within the fiber handling track (See for example lower fingers 30, tabs 38 in Figure 4); a plurality of cover bosses (See 34 in Figure 4); and a plate coupled to the cover bosses, the plate retaining the optical fibers within the fiber handling track (See 52 in Figure 4). McGrath et al. lacks a bell flare located at one or both ends of the fiber handling track, the bell flare adapted to receive the optical fibers diverted by the one or more radius control bosses and divert the received optical fibers from the second direction to a third direction substantially perpendicular to the second direction; and the fiber handling track further comprising a plurality of radius control tabs, each pair of radius control tabs being spaced away from and located between adjacent pairs of radius control bosses, the radius control tabs further restricting the bending of the optical fibers diverted by the radius control bosses. However, Kobayashi et al. teaches a fiber handling apparatus (See for example Figures 1A, 1B, 1C) that includes a fiber track (See lower portions of Figures 1A, 1B), wherein a bell flare is located at one or both ends of the fiber handling track (See 7a, 7b in Figure 1B), the bell flare(s) adapted to receive the optical fibers diverted by the one or more radius control bosses and divert the received optical fibers from the second direction to a third direction, the bell flare including at least two flared portions (See 71, 72 in Figure 4). The Examiner notes that although Kobayashi et al. shows the fiber (See 43 in Figure 1B) as

being in the same direction exiting the bell flare as in the fiber track, the fiber may exit the bell flare in any direction that is allowed by the bell flare, including a third direction that is perpendicular to the direction of the fiber in the fiber track. The Examiner further notes that the curvature of the bell flare limits the curvature of the fiber to a minimum bend radius. The combined teachings of McGrath et al. and Kobayashi et al. lack the fiber handling track further comprising a plurality of radius control tabs, each pair of radius control tabs being spaced away from and located between adjacent pairs of radius control bosses, the radius control tabs further restricting the bending of the optical fibers diverted by the radius control bosses. However, Vidacovich et al. teaches a fiber distribution frame system (See for example Figures 1, 7), wherein the fiber handling track (See for example right hand side of Figure 1) includes a plurality of radius control tabs (See for example 104 in Figure 1), each pair of radius control tabs being spaced away from and located between adjacent pairs of radius control bosses (See for example 102 in Figure 1), the radius control tabs further restricting the bending of the optical fibers diverted by the radius control bosses (See for example Figure 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a bell flare located at one or both end of the fiber handling track, the bell flare adapted to receive the optical fibers diverted by the one or more radius control bosses and divert the received optical fibers from the second direction to a third direction substantially perpendicular to the second direction; and the fiber handling track further comprising a plurality of radius control tabs, each pair of radius control tabs being spaced away from and located between adjacent pairs of radius control bosses, the radius control

tabs further restricting the bending of the optical fibers diverted by the radius control bosses, as taught by Kobayashi et al. and Vidacovich et al., in the fiber handling track of the equipment rack of McGrath et al., for the purpose of 1) reducing excessive bending, such as by crimping, of the fiber at the ends of the fiber track, thus reducing signal losses in the fiber due to bends in the fiber, and 2) preventing the optical fibers from slipping out of the fiber handling track.

7. Claims 3, 5, 14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrath et al., in view of Kobayashi et al. and Vidacovich et al.

McGrath et al. in view of Kobayashi et al. and Vidacovich et al. discloses the invention as set forth above, except for either the one or more radius control bosses restricting the bending of the received optical fiber to at least a radius of 25 mm. It is extremely well known in the art of optical communications via optical fiber to assure that the optical fiber has no sharp bends or kinks along the length of the fiber. It is further well known in the art that as the bend radius of an optical fiber becomes smaller, the signal attenuation in the fiber increases due to bending attenuation in the fiber. Thus, choosing to limit the bend radius of the optical fiber along the fiber length to be greater than a minimum bend radius, such as 25 mm, would have been obvious to one skilled in the art. One would have been motivated to do this to reduce/prevent bending attenuation losses in the optical fiber.

*Conclusion*

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

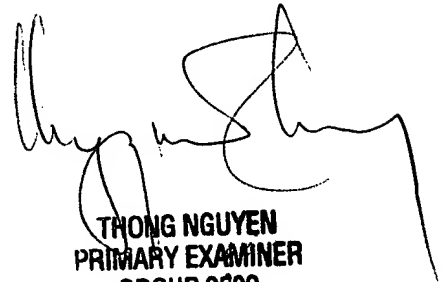


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arnel C. Lavarias  
6/28/04



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